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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

STEELE, JENNIFER A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/714,370	Applicant(s) MCGUIRE ET AL.	
	Examiner Jennifer Steele	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,15-17 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,15-17 and 29-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The amendment filed 4/16/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The specification was amended to change the FR resin coating to an FR coating that does not contain a resin. The difference between an FR coating and an FR resin coating is considered to be new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

2. The specification contains some reference to FR resin and examiner is unclear if this is in error or in fact there still remains teaching of FR resins. The use of the term FR coating is a clear or translucent latex is used on pg. 5 and it is known in the art that latex can be equated with resin. On pg. 7, the specification refers to "Guardex products with binding function are about 60-90% binder latex and the remainder is FR resin latex. The above FR produce (Guardex) is typically a liquid product applied as a spray or by dipping. " On pg. 8 "Suitable synthetic fibers compatible with FR resin are polyester..."

3. The declaration establishes that the materials, Guardex and Glotex are not FR resin based materials and that is sufficient to allow the applicant to amend the specification. However the declaration is not sufficient to allow the applicant to amend every instance of resin in the specification to coating. The disclosure does not limit the

FR materials to Guardex and Glotex and coating is a much broader term than resin, since the term coating can include resin.

Claim Rejections - 35 USC § 112

4. Claim 1 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification lacks support for the broad fibers claimed, and the specification lacks support for the exclusive language of inherent FR fiber are only inherent FR polyester and inherent FR rayon. Therefore the amended claim 1 is considered new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 describes a "nonwoven article comprising from about 6 to 25 wt. % of low melt binder, from about 25 to 75% synthetic fiber coated with FR material and synthetic and/or natural fiber not coated with FR material". Examiner considers this claim to read the nonwoven article is comprised of three components, low

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melt binder, synthetic fiber coated with FR material and synthetic and/or natural fiber not coated with FR material. The composition of the components is 6-25% is a low melt binder and remaining 25% to 75% is a mixture of fiber with FR coated material and the fiber without FR coated material. The claim continues "wherein any inherent FR fiber in the article is selected from the group consisting of ..." The claim did not disclose an inherent FR fiber and the reference to inherent fiber is indefinite. The claim disclosed a fiber with or without a coating of FR material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Neogi (WO 90/11171) and in view of O'Brian (US 3,625,753). Neogi teaches fibers coated with a thermoplastic binder that can impart different properties on the fiber including fire resistance. Neogi teaches blending coated/treated fibers with non-coated/non-treated fibers and thermally bonding to produce a bonded web. Neogi teaches the fiber produce may include one or more solid particulate materials adhered to the fibers by the thermoplastic binder material. Solid particulate material is applied to the fibers while the liquid binder material on the fibers is still at least partially wet. As the liquid binder material dries, the particulate material is adhered to the fibers. The particulate materials may comprise a fire retardant material (pg 8 line 13-22 and claim 35). Neogi differs from the current application and does not teach coating synthetic fibers with FR material.

O'Brian teaches solutions that render fibers and textiles non-flammable (ABST).

O'Brian teaches a flame retardant coating that can be used for natural fibers and synthetic fibers and blends thereof (col. 1, lines 45-55). O'Brian teaches a dimethylol dicyandiamide and phosphoric acid flame retardant system that does not require a resin (col. 1, lines 25-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use FR coated synthetic fibers instead of FR coated natural fibers in Neogi motivated by O'Brian who teaches coating either synthetic or natural fibers with FR material in order to make an FR fabric.

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7. Claim 1, 3, 4, 6, 7, 9, 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Mater (US 2004/0198125) and in view of Neogi (WO 90/11171).

Mater teaches a nonwoven highloft flame barrier for use in mattresses and upholstered furniture that comprises a blend of fibers that are inherently fire resistant and essentially nonshrinking to direct flame (ABST). Mater teaches a blend of inherently fire resistant fibers, inherently flame retardant fibers and low melt binder fibers [0001]. Mater teaches a total of (6) categories of fibers in the blends that include the inherently fire resistant fibers, inherently flame retardant fibers, low melt binders, natural fibers, non-flame retardant fibers such as synthetic fibers and halogenated binder resin [0074-0085]. Mater teaches that the inherently fire resistant fibers include viscose rayon based fibers. Mater teaches FR polyester, FR cotton and other FR treated fabrics [0002]. Mater teaches a composition wherein the low melt binder is 15% and 20% (examples on pages 9-11).

Mater differs from the current application and does not teach an FR coated fiber and does not teach inherently FR fibers in the blend are only rayon or polyester or combinations thereof.

Mater does not teach the FR coated fibers blended with inherent FR fibers and synthetic and/or natural fibers. Neogi teaches that fire retardant fibers can be formed by coating fibers with a resin comprising fire retardant particles and that such fibers can be blended with other non coated, non fire retardant fibers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed FR coated fibers as taught by Neogi in a blend of FR fibers and non-FR fibers motivated by the

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expectation that this would be an alternative, equivalent means of providing fire resistant fibers which could be blended with non fire resistant fibers and bonded to form a nonwoven fabric.

Neogi teaches fibers coated with a thermoplastic binder that can impart different properties on the fiber including fire resistance. Neogi teaches blending coated/treated fibers with non-coated/non-treated fibers and thermally bonding to produce a bonded web. Neogi teaches the fiber produce may include one or more solid particulate materials adhered to the fibers by the thermoplastic binder material. Solid particulate material is applied to the fibers while the liquid binder material on the fibers is still at least partially wet. As the liquid binder material dries, the particulate material is adhered to the fibers. The particulate materials may comprise a fire retardant material (pg 8 line 13-22 and claim 35).

As to claim 3, Mater teaches synthetic fibers include polyester, nylon, polyolefins, acrylics [0083].

As to claim 4 and 5, Mater teaches inherent FR rayon [0070] and FR polyester [0002].

As to claim 6, Mater teaches uncoated natural fibers including cotton, wool, silk, mohair, cashmere [0080].

As to claim 7, Mater teaches a low melt bicomponent fiber [0074].

As to claim 9, Mater teaches examples wherein the uncoated synthetic fiber is 0-40% which is in the range of 20-70%.

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8. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Mater (US 2004/0198125) in view Neogi (WO 90/11171) and in further view of Cook (US 2,381,487).

Mater (US 2004/0198125) in view Neogi (WO 90/11171) differs from the current application and does not teach the type of FR coating material. Cook teaches fire retardant treatment for fabric, paper, pasteboard, yarns and fibers. As to claim 2, Cook teaches treatments include a fire retardant composition of a borate group and an ammonium salt and teaches ammonium sulfate (pg. 1, lines 53-55 and lines 29-35). Cook teaches the invention may be employed in the treatment of all types of textile fabric or yarns or loose fibers (pg. 2, lines 68-75).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a fire retardant coating of Cook in the blends of FR and non-FR fibers of Neogi motivated to produce a FR material.

9. Claim 33 and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Mater (US 2004/0198125) and in view of Neogi and in further view of "Flame Retardancy; Encyclopedia of Polymer Science and Technology". Mater teaches a nonwoven, highloft flame barrier suited for use in mattresses and upholstered furniture. Mater teaches a blend of fibers that are inherently fire resistant fibers that include melamine, viscose rayon based fibers and fibers extruded from polymers made with halogenated monomers and low-melt binder fibers. Other fibers can also be included such as natural fibers (ABST). Mater teaches conventional fire retarding (FR) chemicals including halogen-based, phosphorus-based and/or antimony-based

chemicals [0002]. Mater differs from the current application and does not teach a blend of FR coated fibers and non-FR coated fibers and Mater does not teach red phosphorus. Neogi teaches blends of FR coated and non-FR fibers but does not teach the type of coating.

The Encyclopedia of Polymer Science and Technology teaches phosphorus-based flame retardants and teaches red phosphorus can be used as a flame retardant at low levels.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a red phosphorus compound as a phosphorus compound motivated to use less FR material.

Double Patenting

10. Claims 1-7 and 9-17 and 33-34 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4,6-24 of copending Application No. 10/392999. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are drawn to overlapping inventions. The amounts of each component would have been easily determined. New claims 33 and 34 are similarly rejected. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

11. Applicant's arguments and amendments filed 4/16/2007 have been fully considered but they are not persuasive. Applicants amended specification and claims to refer to the FR material as FR material and not FR resin. The specification revision is objected to as new subject matter because, even though it is true that a change to correct an error is not new matter if both the error and the correction would be appreciated by one skilled in the art, it is not clear that one skilled in the art would recognize that every instance of resin the instant specification should be changed to coating. A coating is a broader term which encompasses resins as well as other materials. Therefore it is not clear that it would be a recognized correction to change resin to coating since a resin would be a type or subset of coating. Further, with regard to the specific material of Guardex and Glotex, the declaration filed is sufficient to say what these materials are and to allow the specification to be amended to recite what the declaration states that these materials are, but the FR resins and/or coatings disclosed in the specification were not limited to Guardex and Glotex so it is not sufficient to allow each instance of resin to be changed to coating.

12. Applicants arguments with respect to the 35 USC 112 2nd paragraph are persuasive and this rejection has been withdrawn.

13. Applicant's amended claim 1 to remove PAN fibers and therefore the 35 USC 103(a) rejection of Ogle in view of Neogi rejection has been withdrawn. Applicant recites amended claim 1, however this claim 1 is not the same as the claim 1 that was submitted with the amendment. Examiner requests clarification because it appears that

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this could be a typing or editing error. The claim 1 as written in the remarks is actually claim 1 and claim 2 combined as it reads in the claim text.

14. Applicant's arguments with respect to Assink of the Office Action of 9/12/2005 is withdrawn because the amended claim 1 no longer claims FR coated natural fibers.

15. Applicant's arguments with respect to Mater of the Office Action of 9/12/2005 are not persuasive. Mater teaches inherent FR fibers combined with binder fibers and synthetic and/or natural fibers. The arguments recite Mater's listing of categories of fibers and preferred compositions. The listing teaches that compositions of these fibers can be used and provide ranges of compositions. The examples of Mater do not include all 5 categories and do not include the halogenated fibers in every blend and every layer. Mater teaches individual layers that include only an inherent FR fiber of category 1, a synthetic fiber and a binder. The inherently FR fibers of category 1 include rayon. The single layers of Mater comprising the inherently FR fibers of category 1 are construed as analogous to the claimed nonwoven article, and therefore, Mater in combination with Neogi as stated in this office action teaches the Applicant's invention.

16. The Applicant states that a terminal disclaimer will be filed to overcome the double patenting rejection if there is allowable subject matter. The double patenting rejection is not withdrawn.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Steele whose telephone number is (571) 272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ELIZABETH M. COLE
PRIMARY EXAMINER

7/3/2007